

AN INVESTIGATION INTO CURRENT  
METHODS OF PUPIL CLASSIFICATION  
IN THE ELEMENTARY SCHOOL

BY  
CLAUDE JOHNSON YAWN



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CLASSIFICATION IN THE ELEMENTARY SCHOOL

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MAUDE JOHNSON YAWN

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## INTRODUCTION

The meaning of the term "classification" has provoked much discussion in recent literature. Some authors<sup>1</sup> state that pupils are classified when they are placed in one of the grades for school instruction, while other writers<sup>2</sup> imply that classification and ability grouping are synonymous terms and are used in describing the practice of dividing the pupils of any one grade into classes, or of grouping the pupils within a class for teaching purposes. Obviously, the problem of segregating the pupils into class groups of convenient size is closely related to the question of school progress. Some authors<sup>3</sup> treat them together.

In the following discussion "classification" is defined as a device for providing instructional

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1.A.O.Heck, The Administration of Pupil Personnel, Ginn and Co., 1929, p.434.

2.E.W.Tiegs, Tests and Measurements for Teachers, Houghton-Mifflin Co., 1931, p. 149.

3.W.C.Reavis, and Others, The Elementary School, University of Chicago Press, 1931, Chapter vii.



opportunities for large numbers of pupils at the same time.

Scientific classification of pupils is a development of modern times; however, sorting of pupils existed in early colonial times. The primary function of classification in colonial times was the selection of pupils for training in future careers, while the chief purpose at the present time in grouping is to improve the learning situation.

In the present study little consideration has been given to the historical aspects of the problem; the emphasis, on the contrary, has been placed upon newer developments which have occurred during recent years.

The three main purposes of this study are as follows : (1) to identify and study comprehensively the prevailing practices of classification of elementary school children; (2) to determine the status of these current practices of classification; and, (3) to propose some classification procedures.

It is with gratitude that the author acknowledges indebtedness to Professor J.C. Peel, Dean of the Graduate School, for suggesting the title of



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## CHAPTER I

### PRESENT STATUS OF ABILITY GROUPING

Turney<sup>1</sup> defines "ability grouping" in these terms :" The aim of ability grouping is to bring together pupils who will be able to work together under conditions permitting the fullest possible development of the individuals involved ". As the name implies, ability grouping may be thought of as an attempt to place the duller children, or those who learn more slowly, in one group and the brighter, or faster-moving children , in a separate group. Many schools classify the children of a given grade into three different levels according to their ability as determined by intelligence test scores, teachers' judgments, subject matter achievement scores, or some combination of these three. This division into three groups is quite commonly called X-Y-Z grouping<sup>2</sup> . In this design -

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1.A.H.Turney, " The Status of Ability Grouping", Educational Administration and Supervision, Vol.17, January, 1931, pp.21-23.

2.J.R.McGaughy, An Evaluation of the Elementary School With a Forecast for the Future , The Bobbs-Merrill Co. 1937, pp.9-10.

1. 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 20100

nation the X group is the brightest group, the Y group is the average group, and the Z group is made up of the slowest-learning pupils. The grading system itself, that is, the organization of the elementary school into first, second, third, fourth grade, et cetera, was an early attempt at a type of homogeneous grouping. One reason for its adoption was the belief that a teacher could be more effective in her work if all the pupils were at somewhat the same level of subject matter mastery. It is the assumption that fourth grade children, for instance, are at somewhat the same level of attainment in the separate subject fields, no matter how widely they may range in chronological age or in intelligence.

In keeping with the present movement to produce rightly directed growth in each child, the old inflexible system of classification, with its single course of study for each grade, is now being modified in various ways. Despite the financial economy, standardization of courses and methods, mutual helpfulness of pupils, and other advantages claimed for this conventional grouping, it has



been found to present to individual development serious obstacles that should be prevented or over-  
<sup>3</sup>come. Graves has very aptly made the following statement regarding the classification of pupils:

In an endeavor to meet the needs of the 'average pupil', who is, of course, purely a fiction, classroom teachers have in the past failed to recognize the significance of individual differences, which are evident in children of all ages. Instead of studying individual pupils and adapting the grouping and course of study to the needs of each, the attempt has been made to accommodate their different kinds of ability to the stereotyped organization by means of 'acceleration', or granting double promotions to the brighter child, and 'retardation', or making the dull one repeat the grade. In general, the schools have operated upon the principle of 'survival of the fittest'..... At best, the machinery of ability grouping can never be fine enough to meet the particular needs of each and every child. ....Pupils may as a whole be on the level of ability of their groups in the attainment for all school subjects and yet have various physical and mental peculiarities to overcome or exceptional qualities in other directions that place them well above the others. Many pupils will, obviously, require further observation and the application of remedial measures....Some procedure is necessary to supplement ability grouping.

<sup>4</sup>Brooks holds that arguments usually made for ability grouping are not altogether sound or

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3. Frank P. Graves, The Administration of American Education With Especial Reference to Personnel Factors, The Macmillan Co., 1932, pp. 95-96.

4. W.G. Brooks, The Attendant Evils of Homogeneous Grouping, The Century Company, 1930, p. 505.



are counterbalanced by a disrespect for the total personality of the child, but that the solution is not to discard the testing program but to secure a class organization " wherein the child will come into his own as the center of activity and effort in which many affronts to his personality will be left behind".

5

Cornell finds that criticisms of ability grouping are justified by the evidence that it does not produce sufficient homogeneity to relieve the teacher of the necessity of providing work for the individual. She further holds that it is justified to the degree to which it is homogeneous not in respect to school achievements only but with respect to needs, such as social compatibility, competition with peers and methods of learning, to educational expectations, probable occupational status, and certain social responsibilities.

6

Hughes, after presenting various plans for

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5. Ethel L.Cornell, "The Effect of Trait Differences in Ability Grouping", The University of the State of New York, Bulletin No. 981, Albany, N.Y. Oct. 1, 1931.

6. W.Hardin Hughes, "How Homogeneous is a Homogeneous Group?", Nation's Schools, Oct. 1930, pp. 21-25.



combining group and individual procedures, concludes " that there will remain innumerable qualities of personality which must be taken into account" and render the realization of homogeneous grouping all but impossible.

7

The conclusion made by Kelihier , after making a comprehensive study of this subject, is that present standardization tests do not measure the broad scope of intelligent behavior or learning and that great reduction of variations by sorting individuals into groups that are relatively stable is impossible, and( with less certainty),that discouragement and suppression are not so likely to result in heterogeneous grouping.

8

Symonds holds that " ability grouping does not wholly care for individual differences and is part of an educational philosophy that gives supreme attention to the academic with consequent neglect to other phases of the child's nature, this

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7. Alice V. Kelihier, A Critical Study of Homogeneous Grouping, Teachers College( Columbia University), New York,1931,( Contributions to Education, No.452. )

8.Percival M. Symonds, "Homogeneous Grouping". Teachers College Record, XXXII, pp.501-517, March, 1931



outcome is not necessary and the mental hygiene effects of whatever grouping is put into effect will depend upon administrative policies and control".

9

Dougherty and Others have listed some of the characteristic arguments against ability grouping of children. They are as follows:

1. An adequate basis for grouping has not been scientifically determined.

2. Ability grouping does not approach real life situations in any respect.

3. Ability grouping develops class distinctions....., a sense of inferiority in the lower group and a feeling of superiority in the upper group; a stigma is attached to the lower group.

4. Ability is specific, therefore it is impossible to form groups that are homogeneous in each of the various subjects, with a single general classification.

5. Grouping on the basis of special ability is not practical from an administrative viewpoint.

6. The curriculum is not adjusted to the different levels of ability represented by the groups.

7. Ability grouping causes jealousy and resentment on the part of pupils and parents.

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9. James Henry Dougherty, Frank Herman Gorman, and Claude Anderson Phillips, Elementary School Organization and Management, The Macmillan Co., 1936, p. 265.

110 G. T. G. T.

$$\frac{d}{dt} \left( \frac{1}{2} \int_{\Omega} \left( u^2 + \frac{1}{2} |\nabla u|^2 \right) \right) = - \int_{\Omega} u \Delta u - \int_{\Omega} u \left( \frac{\partial u}{\partial \nu} \right)^2 \leq 0.$$

1966-67 6-1 1-2 3-2 1-1 1-1 1-1 1-1

6.1.2020 17:30:00 17:30:00 17:30:00 17:30:00 17:30:00 17:30:00

Final state of the simulation and the

1.  $\alpha = 2.11 \times 10^6 \text{ s}^{-1}$  and  $\beta = 1.0$ .

— 55 —

## 31. *Chlorophytum comosum* (L.) Willd.

## Challenging the traditional view of the evolution of the brain

## 0.1. **GENERAL INFORMATION** (CONTINUED)

<sup>32</sup> See, for example, the discussion of the quality of the 1960s in the introduction to *1960s*.

the 12th of January, 1850, and the 13th of January, 1850.

## WILHELM KUNZENBERGER

ESTATE TAXES FOR THE MEDIUM AND LARGE FAMILIES

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8. Teachers are not trained to teach effectively groups of the various levels of achievements.

9. Ability grouping causes an undesirable competitive spirit between pupils, and in some cases between teachers and patrons.

<sup>10</sup>

They have likewise listed many arguments that have been advanced in favor of ability grouping. They are as follows:

1. Pupils are generally able to make better educational progress in homogeneous groups.

2. There is some evidence that ability grouping reduces failure and discouragement.

3. Ability grouping renders teaching easier.

4. Motivation is increased by ability grouping.

5. Ability grouping makes a differentiation of the curriculum easier.

6. Ability grouping provides more congenial groups, and a better spirit of co-operation.

<sup>11</sup>

In 1926 Worlton gave an account of an extensive experiment with homogeneous grouping on the basis of mental ability. There was a control group to furnish comparable data. The results favored homogeneous grouping. During the same year another

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10. Dougherty and Others, Op. Cit., pp. 265-266.

11. J.T. Worlton, "Is Classification by Mental Ages and Intelligence Worth While?", Journal of Educational Research, XIII, pp. 171-180. March, 1926.



12

eminent psychologist, T.L.Torgerson wrote in favor of homogeneous grouping. He said, " Objective evidence indicates that proper placement of children in groups within a grade, on the basis of mental ability, tends to reduce failures, to overcome mal-adjustments, and to raise the accomplishment quotient of all pupils".

It appears to be relatively safe, then, in the light of the evidence at hand, to say that a true evaluation of ability grouping must await adequate experimental evidence. However, three important devices for evaluating the classification of pupils are the age-grade, grade-progress, and age-grade-progress tables, samples of which are shown on the following pages and an explanation of which follows:

Age-Grade Table. The age-grade table reveals the number of pupils in each school grade who are of normal age, those who are under age, and those who are over age for the grade. The age-grade survey reveals age conditions by comparing the age of a pupil with the grade in which he is located, but does not in any way diagnose the

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12. T.L.Torgerson, " The Why of Homogeneous Classification", Elementary School Journal ,XXVII, pp.265-274, Dec. ,1926.



situation.

Grade-Progress Table ,A grade-progress table compares the grade in which a child is located with the number of years he has been in school. This device reveals the amount of time a pupil takes to reach the grade in which he is located. It, then, is diagnostic to the extent that it emphasizes the need to investigate the causes of slow progress.

Age-Grade-Progress.Table. The age-grade-progress table ,obviously, is a combination of the age-grade and the grade-progress investigation and reveals the amount of time a pupil takes to reach the grade he is now in and the number of pupils in each school grade who are of normal age, the number who are under age, and the number of pupils who are overage for the grade.

13

Dougherty and Others aver that some of the most common causes of slow progress are: rigid standards, lack of ability, inadequate curricula, poor instruction, home environment, frequent cases of illness, delinquency, and frequent transfers.

2013-2014

17. *Urtica dioica* L. (Urticaceae) (Fig. 17)

## AGE-GRADE TABLE

## CHRONOLOGICAL AGE-GRADE TABLE

School Age	Grade Grades and Frequency	Date	Total				
	1	2	3	4	5	6	
5½							
6							
6½							
7							
7½							
8							
8½							
9							
9½							
10							
10½							
11							
11½							
12							
12½							
13							
13½							
14							
14½							
15							
Above							
Total							
No. U.A.							
% U.A.							
No. N.A.							
% N.A.							
No. O.A.							
% O.A.							



## GRADE-PROGRESS TABLE

GRADE-PROGRESS TABLE							
School		Date					
Yrs. in	School	Grades					Total
		I	II	III	IV	V	VI
0							
$\frac{1}{2}$							
1							
$1\frac{1}{2}$							
2							
$2\frac{1}{2}$							
3							
$3\frac{1}{2}$							
4							
$4\frac{1}{2}$							
5							
$5\frac{1}{2}$							
6							
$6\frac{1}{2}$							
7							
$7\frac{1}{2}$							
8							
$8\frac{1}{2}$							
9							
Total							
No. R.P.							
No. N.P.							
No. S.P.							
% R.P.							
% N.P.							
% S.P.							

Note: No.R.P.-Number Rapid Progress  
 No.N.P.-Number Normal Progress  
 No.S.P.-Number Slow Progress  
 % R.P. -Per cent Rapid Progress  
 % N.P. -Per cent Normal Progress  
 % S.P. -Per cent Slow Progress



AGE - GRADE - PROGRESS TABLE

AGE-GRADE-PROGRESS TABLE

School \_\_\_\_\_ Grade \_\_\_\_\_ Date \_\_\_\_\_



## CHAPTER II

## BASES FOR CLASSIFICATION--CURRENT PROCEDURES

A survey conducted by Otto<sup>1</sup> in 1929 revealed that current procedures used in classifying pupils for instructional purposes fell into four categories, as follows, as has been stated by Dougherty and Others<sup>2</sup>:

Policy No. 1. The pupils of any one grade of the elementary school of a system are not divided on the basis of intelligence or any other measure into groups or sections for instructional purposes. The pupils are arbitrarily assigned to one or more classrooms to obtain classes of convenient size.

Policy No. 2. The pupils of any one grade of the elementary school of a system are divided on the basis of intelligence into two distinct sections. The pupils in each of the two groups are organized into classes for instructional purposes.

Policy No. 3. The pupils of any one grade of the elementary school of a system are divided on the basis of intelligence or other measures into three distinct sections. The pupils in each of the three groups are organized into classes for instructional purposes.

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1. H.J.Otto, "Current Practices in the Organization of Elementary Schools", Northwestern University Contribution to Education, Series No. 5, pp. 32-33.

2. J.H.Dougherty and Others, Op. Cit., pp. 257-258.

RECORDED IN THE BUREAU OF THE CENSUS, WASHINGTON, D. C., 1950.

## Section 1. Definitions and General Provisions

Policy No. 4. Miscellaneous practices which could not be classified among policies 1,2, or 3. Usually this practice refers to the division of the pupils of a grade into four, or five, or a number of groups.

Analysis revealed that Policy No. 2 was much more commonly used than the other three; forty-four per cent of the cities included in the investigation employed this method of classification of pupils. Objective measurements were used in sectioning pupils in approximately two-thirds of the schools.

An analysis of the literature concerning current classification procedures indicate that a large number of plans are in use. The various measures reported were used in approximately ninety different combinations. This fact would lead one to believe that administrators are pursuing plans which have been recommended on the basis of research.

Some of the most commonly used bases for classification are: (1) chronological age, (2) mental age, (3) educational age, (4) social age, (5) intelligence quotient, (6) physiological age, (7) teacher's judgment, and, more recently, (8) case study.

the following table. The first column gives the number of the test, the second column the number of the sample, the third column the number of the dilution, the fourth column the number of the dilution in which the reaction was positive, and the fifth column the number of the dilution in which the reaction was negative. The dilutions are given in powers of 2. The first dilution is 1/2, the second is 1/4, the third is 1/8, the fourth is 1/16, the fifth is 1/32, the sixth is 1/64, the seventh is 1/128, the eighth is 1/256, the ninth is 1/512, the tenth is 1/1024, the eleventh is 1/2048, the twelfth is 1/4096, the thirteenth is 1/8192, the fourteenth is 1/16384, the fifteenth is 1/32768, the sixteenth is 1/65536, the seventeenth is 1/131072, the eighteenth is 1/262144, the nineteenth is 1/524288, the twentieth is 1/1048576, the twenty-first is 1/2097152, the twenty-second is 1/4194304, the twenty-third is 1/8388608, the twenty-fourth is 1/16777216, the twenty-fifth is 1/33554432, the twenty-sixth is 1/67108864, the twenty-seventh is 1/134217728, the twenty-eighth is 1/268435456, the twenty-ninth is 1/536870912, the thirtieth is 1/1073741824, the thirtieth is 1/2147483648, the thirtieth is 1/4294967296, the thirtieth is 1/8589934592, the thirtieth is 1/17179869184, the thirtieth is 1/34359738368, the thirtieth is 1/68719476736, the thirtieth is 1/137438953472, the thirtieth is 1/274877906944, the thirtieth is 1/549755813888, the thirtieth is 1/1099511627776, the thirtieth is 1/2199023255552, the thirtieth is 1/4398046511104, the thirtieth is 1/8796093022208, the thirtieth is 1/17592186044416, the thirtieth is 1/35184372088832, the thirtieth is 1/70368744177664, the thirtieth is 1/140737488355328, the thirtieth is 1/281474976710656, the thirtieth is 1/562949953421312, the thirtieth is 1/112589990684264, the thirtieth is 1/225179981368528, thethirtieth is 1/450359962737056, the thirtieth is 1/900719925474112, the thirtieth is 1/1801439850948224, the thirtieth is 1/3602879701896448, the thirtieth is 1/7205759403792896, the thirtieth is 1/14411518807585792, the thirtieth is 1/28823037615171584, the thirtieth is 1/57646075230343168, the thirtieth is 1/11529215046068632, the thirtieth is 1/23058430092137264, the thirtieth is 1/46116860184274528, the thirtieth is 1/92233720368549056, the thirtieth is 1/184467440737098112, the thirtieth is 1/368934881474196224, the thirtieth is 1/737869762948392448, the thirtieth is 1/1475739525896784896, the thirtieth is 1/2951479051793569792, the thirtieth is 1/5902958103587139584, the thirtieth is 1/11805916207174279168, the thirtieth is 1/23611832414348558336, the thirtieth is 1/47223664828697116672, the thirtieth is 1/94447329657394233344, the thirtieth is 1/188894659314788466688, the thirtieth is 1/377789318629576933376, the thirtieth is 1/755578637259153866752, the thirtieth is 1/151115727451830773504, the thirtieth is 1/302231454903661547008, the thirtieth is 1/604462909807323094016, the thirtieth is 1/1208925819614646188032, the thirtieth is 1/2417851639229292376064, the thirtieth is 1/4835703278458584752128, the thirtieth is 1/9671406556917169504256, the thirtieth is 1/19342813113834339008512, the thirtieth is 1/38685626227668678016024, the thirtieth is 1/77371252455337356032048, the thirtieth is 1/154742504910674712064096, the thirtieth is 1/309485009821349424128192, the thirtieth is 1/618970019642698848256384, the thirtieth is 1/1237940039285397696512768, the thirtieth is 1/2475880078570795393025536, the thirtieth is 1/4951760157141590786051072, the thirtieth is 1/9903520314283181572102144, the thirtieth is 1/19807040628566363144204288, the thirtieth is 1/39614081257132726288408576, the thirtieth is 1/79228162514265452576817152, the thirtieth is 1/15845632502853090515363432, the thirtieth is 1/31691265005706181030726864, the thirtieth is 1/63382530011412362061453728, thethirtieth is 1/126765060022824724122915456, the thirtieth is 1/253530120045649448245830912, the thirtieth is 1/507060240091298896491661824, the thirtieth is 1/1014120480182597792983323648, the thirtieth is 1/2028240960365195585966647296, the thirtieth is 1/4056481920730391171933294592, the thirtieth is 1/8112963841460782343866589184, the thirtieth is 1/16225927682921564687733781768, the thirtieth is 1/32451855365843129375467563536, the thirtieth is 1/64903710731686258750935127072, the thirtieth is 1/129807421463372517501870254144, the thirtieth is 1/259614842926745035003740508288, the thirtieth is 1/519229685853490070007481016576, the thirtieth is 1/1038459371706980140014962033152, the thirtieth is 1/2076918743413960280029924066304, the thirtieth is 1/4153837486827920560059848132608, the thirtieth is 1/8307674973655841120011881265216, the thirtieth is 1/16615349947311682240023762530432, the thirtieth is 1/33230699894623364480047525060864, the thirtieth is 1/66461399789246728960095050121728, the thirtieth is 1/132922799578493457920190100243456, the thirtieth is 1/265845599156986915840380200486912, the thirtieth is 1/531691198313973831680760400973824, the thirtieth is 1/1063382396627947663361520801947648, the thirtieth is 1/2126764793255895326723041603895296, the thirtieth is 1/4253529586511790653446083207785592, the thirtieth is 1/8507059173023581306892166415571184, the thirtieth is 1/17014118346047162613784332831142368, the 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At this point these different types of classification will be discussed separately.

Chronological Age as a Basis for Classification.

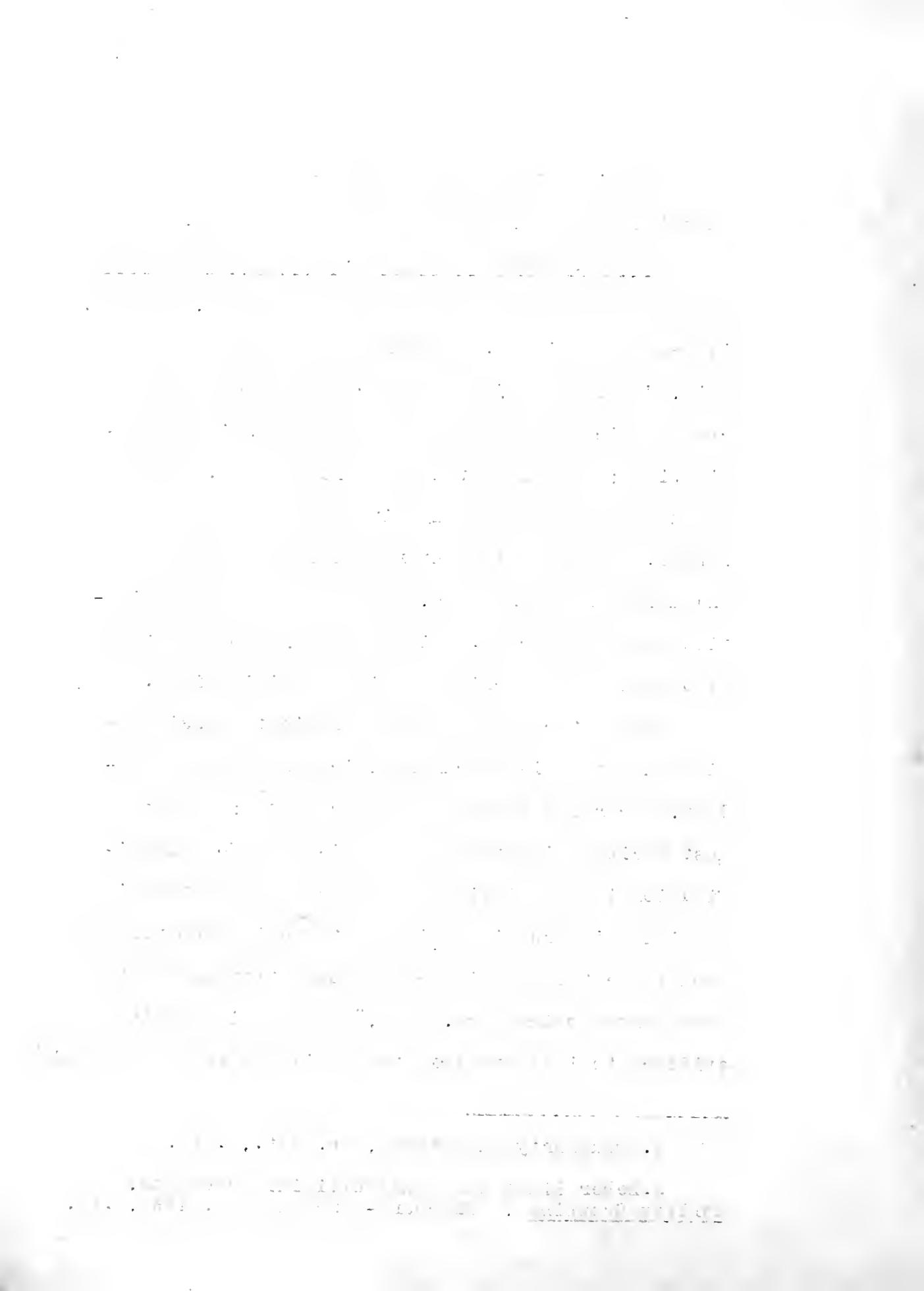
This is probably the simplest method known, however,<sup>4</sup> it tells but little. Dougherty and Others have said, "A large majority of school systems use chronological age as one of the factors in classification ; some use it as the only factor. State attendance laws generally give the age for entering school. If all pupils enter school at a given age and make normal progress, age and grade classification agree perfectly. This is a very common method of using age as a criterion in classification".

The most common arguments against classification on the basis of chronological age are as follows, according to Ryan and Crecelius<sup>5</sup> : (1)The most serious disadvantage of this plan for classification is the difficulty a teacher encounters in providing instruction suitable to pupils who vary so much in mental maturity even though they are of the same chronological age," and, "(2)There is abundance evidence to indicate that the pupils in any unselected group

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4. Dougherty and Others, Op. Cit..p.258.

5. Heber Hinds Ryan and Philipine Crecelius, Ability Grouping , Harcourt-Brace and Co.,1927,p.46.



will not be able to progress in learning at approximately the same rate of speed, due to other factors".

Mental Age as a Basis for Classification. " For <sup>6</sup> classification purposes", said Arthur S.Otis, "it is highly desirable that pupils in one group shall have reached as nearly as possible the same degree of mental ability, that is, the same stage of mental development as measured by mental age or score in a mental ability test".

<sup>7</sup> Dougherty and Others have the following to say concerning classification of pupils when mental age is used as a basis:

There is some scientific evidence that mental age represents a better single basis upon which to classify pupils.....It is thought that pupils that register the same mental ages should be able to learn material at approximately the same level of difficulty.

There are several difficulties in classifying pupils according to mental age. First, pupils do not enter school at the same mental age. Second, they do not remain at the same mental age even when they are classified on that basis. Third, classification on the basis of mental age naturally brings together pupils whose chronological ages and social ages may differ widely. It may be necessary to re-classify many times during a pupil's school career, if mental age is the criterion upon which classification is based.

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6. Arthur S.Otis, How Should Pupils Be Classified? Bulletin No. 6, Dept. of Test Service of The World Book Co., Yonkers-On-The-Hudson, N.Y.

7. Dougherty and Others, Op.Cit. p.259.



Educational Age as a Basis for Classification.

<sup>8</sup> ~~Otto~~ indicates that educational age is the most reliable single measure upon which to classify pupils while Dougherty and Others <sup>9</sup> have the following to say regarding the classification of pupils when educational age is used as a basis:

Educational age, or age as measured by achievement tests, represents the most objective, specific, and reliable single basis for classification of pupils..... Classifying pupils according to academic achievement age allocates those pupils with approximately the same levels of achievement in one group, but it does not insure that all members of the group will continue to remain comparable. Achievement ages do not include information of the pupil's rate of progress except in an indirect manner.

<sup>10</sup> Social Age as a Basis for Classification. ~~Otto~~ has summarized his findings on the subject of social age as a basis for classification of pupils in the following words:

If the school is looked upon as a place in which is provided a wholesome environment in which children may develop normal health and normal mental attitudes and ideals, social age or social maturity becomes a factor in classification which can hardly be ignored.... A child whose social maturity is much greater than that of other pupils in his room is likely

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8. Henry J.Otto, Elementary School Organization and Administration, D.Appleton - Century Co., 1934, pp. 185-186.

9. Dougherty and Others, Op.Cit. , p.259.

10 ~~Otto~~, Op. Cit., p.6

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to become self-conscious, develop undesirable attitudes which affect conduct and application to work.

Social age consists of a variety of complex factors which are extremely difficult to determine objectively. To date the most easily obtainable indices of social maturity are chronological age and mental age. The extent to which these items are the most essential factors in social age has not been fully determined.

We recognize that this is a field which has afforded the tester little exercise.

11

Ryan and Crecelius have made the statement that the social age of the child is indicated by the chronological age of his companions, by the kinds of amusements he seeks, by his bearing, by his interest in the other sex, by his understanding of complex social situations, and by his leadership. It seems safe to say that the most fruitful and reliable observations of children for this purpose are those made outside the classroom.

On this subject of classification of pupils using social age as a basis, Dougherty and Others have made the following comments:

12

Social age is gaining recognition as an important factor in the classification of pupils. It merits consideration, for much of a pupil's education takes place informally. A pupil's

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11. Ryan and Crecelius, Op.Cit.,p.55.

12. Dougherty and Others, Op. Cit. ,p.261



social age is<sup>a</sup> determining factor in the attitude he takes toward his teachers, his school mates, his school activities, and school in general. A wide range in social maturity of pupils in a group is quite as noticeable and as difficult to handle as scholastic variability. Problems in management concerning social maturity very often become quite pathological in character.

13

Almack<sup>13</sup> feels that social age is a very important factor in classification. He found that choice of associates, which is a social activity, has a close correlation to mental ability.

Social age, as has been previously intimated, is difficult to measure objectively, therefore, it has not been employed universally as a basis for classification.

Intelligence Quotient as a Basis for Classification. <sup>14</sup> Otis has made the following statement concerning classification on the basis of IQ : "Now the measure of a pupil's brightness is his intelligence quotient, and if we wish to divide the pupils of a grade into bright, normal, and dull sections, it is obvious that the intelligence quotient must be used as a basis for this division".

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13. J. C. Almack, "The Influence of Intelligence on the Selection of Associates". School and Society . Vol. 16, Nov., 1922, pp. 529-530.

14. Arthur S. Otis. Op. Cit., p.8.



Physiological Age as a Basis for Classification. By physiological age is meant the state of functional development, <sup>15</sup> and, it is believed by some to be a factor in school success. C. <sup>16</sup> Ward Crampton has made a strong plea for the consideration and thoughtful study of pubescence. He finds post-pubescent stronger physically and mentally than pre-pubescent, and he expresses the opinion that pubescence should be made the basis of distinction in matters of classification. He, however, finds no direct relationship between scholarship and height, weight, or strength, but he finds all these characteristics related to pubescence. He notes also a direct relationship between pubescence and rate of growth. These conclusions seem noteworthy because of his one-time opportunity in the role of physical director to study large numbers of New York boys.

<sup>17</sup> Foster has described an experiment in which

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15. C. Ward Crampton "Anatomical and Physiological vs. Chronological Age", American Physiological Review, Vol. XIII, pp. 141-144.

16. Ibid, pp. 214-227.

17. A. M. Foster, "American Child Health Association", Principles and Practices in Health Education, N.Y., 1931



two hundred ninety-five boys were grouped according to puberal maturity and height. It was found that the failure among these grouped was from 7 to 11 per cent less than in a control section of ungrouped boys. He has expressed the opinion that this grouping created a more agreeable situation among the boys. He also notes a close relationship, between size and pubescence in that tall children usually mature early. In the light of this data, it seems highly probable that the chief importance of functional development, from the standpoint of school work, is to be found in its social implications.

Teacher's Judgment as a Basis for Classification.

As regards classification on the basis of teacher's judgment, <sup>18</sup> Brooks has summarized his position in the following paragraph:

The most significant single source of information for predicting success..... is the judgment of the teachers in the elementary school..... Whatever the combination of factors used for distributing pupils to ability groups, it should contain either a composite of the marks in the elementary school or a rating of capacity by the teacher.

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18. F.D.Brooks, The Psychology of Adolescence, Houghton-Mifflin Co., 1929, p.544.



19

The following quotation from Kefauver indicates that his position is very similar to that of Brooks:

The best single basis for predicting scholarship is the teacher's estimates as to industry, school attainments, intelligence, persistence, conscientiousness, et cetera, and if nothing else indicates future direction more than these factors.

Case Study as a Basis for Classification.

20

Ryan and Crecelius believe that many types of data are needed for the formation of classes among elementary school children, in as much as various kinds of maturity have bearing upon the pupil's ability to do the work that society requires of him. Sex, height, weight, IQ, social age, physiological age, educational age, general condition of health, rank in class, mental age, anatomical age, pedagogical age, home conditions, et cetera, will be useful in making classifications and will indicate his inclinations and interests and should be considered in the placement of the pupil.

21

Symonds also believes that persons do not

20.Ryan and Crecelius, Op. Cit.,p.61.

21.Percival M. Symonds, Mental Hygiene of the School Child , The Macmillan Co. ,1937,p.135.

19.G.N.Kefauver,"The Validity of Bases for Forming Ability Groups",Teachers College Record, Nov.1929, pp.111-113

1. *What is the name of the author?*

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3. *What is the date of publication?*

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readily fall into classified types, but that the combinations of the elements that make up personality are indefinite in number. He thinks that if a classification were to be attempted, a grouping of environmental differences might be most illuminating.

The case study approach can help very materially toward the goal of the best opportunity for every child, because, as stated by Leland<sup>22</sup> :

With such an approach the teacher gathers very specific information about the pupil who, in turn reaps the direct benefit of her ideas. Teaching which knows which way it is going and why is the most effective teaching.

Furthermore, that same teacher becomes, through each case experience, more aware and more concerned about every other case. She is thus enabled to remedy another difficulty more readily, and, also, she sees more readily her opportunity to prevent difficulties in another child.

It is a stimulating experience to feel that the growth which one sees taking place in a child has come about because another problem has been solved by one's own painstaking effort. Such experience means growth for the teacher as well as the child.

Certain points emerge as a result of case studies. In the first place, our problem of non-conforming be-

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22. Bernice Leland, Staff Member of the Detroit Public Schools, Psychiatric Bureau, "Case Study Approach to Difficulties in Reading", Childhood Education, Vol. XIII, No. 8, April, 1937.



havior and of delinquency are more intimately related to inability to do school work than many of us appear to recognize. This is a very practical consideration. To be sure, it is often difficult to know which comes first ; whether a child's inability to do school work first gave impetus to his delinquency or whether his non-conformity first promoted his disability to do school work. By the time the trouble is discovered, the two are interwoven as a vicious circle , although it appears that few teachers have fully sensed this fact. Children perform as they do because they must, as a matter of human nature and human psychology, obtain certain satisfactions for themselves. Opportunities for these satisfactions do not always present themselves adequately in school. They, therefore, seek them in ways which are not socially acceptable.

Below are presented some case studies as cited  
23  
by Miss Leland:

Consider James who was ten and a half years old, in the 2A grade, a failure in every grade so far, and very unpopular with

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23Bernice Leland , Op. Cit, pp.375-377.

the following table gives the  
percentage of the total  
area of the country  
which is covered by  
various types of  
soils.

Estimated area of the country.

the principal and all the teachers. He did very irritating little things--crowded other children in the line, put his foot out to trip the other fellow, slyly tapped his desk with his pencil, and showed very little disposition to do what was expected of him. He could not read, but no one seemed at first to relate this fact to his general behavior. However, he has been studied and helped over a period of years. He now reads acceptably on a level with his mental age and the infantile behavior of those early days has been left behind with the directional confusion which was discovered to be largely responsible for his difficulties in reading.

James is today one of the most dependable boys in the school--courteous, thoughtful, serious. He said not long ago, " I now understand myself better". Perhaps the most important contribution the public school can make to the life of any child is to help him to understand himself. But we must first understand him ourselves.

Consider James again. The sources of his disability were as follows: A mental age under six years which upon entering the first grade made it impossible for him to learn to read; He was placed in competition with children of average and high intelligence and was lost. He had suffered for years from a diseased throat and running ears, with frequent absences as a result and much physical discomfort when he was present. Furthermore, he was a mixed eye-and-hand preference case, confused in direction, uncertain which hand to use, and tending to proceed from right to left. He was an adopted child of parents who had no intellectual interests whatever. The mother was over-protective; the father very harsh and unreasonable, given to loud criticism of the school,

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the government, and to the world in general. This child experienced the emotional distress of repeated failure in spite of his best efforts.

His difficulties have now been quite adequately met by the school. Each succeeding teacher has done her part to learn about him. Perhaps he will never be a fluent reader, but he will read well enough to manage his own humble affairs and he will get on in the world because of the charm of his personality and the serious considerations which he gives to his difficulties.

Another case study is that of Melvin who is just finishing the high second grade with a chronological age of 9 years and 11 months and a mental age of 10 years and 5 months. This case study has been taken from <sup>24</sup> The Classroom Teacher and is as follows:

Melvin did not start to school until he was eight years old. Although he was absent a part of his first year, he easily accomplished the first grade course and then spent an entire year in the second grade. He is well, large even for his age, socially and physically a misfit with smaller, younger pupils in his class. He reads well and succeeds with any work of the grade if he is interested.

He has been serving time and acquiring habits of idleness most of the year. Had he gone to another school at the middle of the year and unwittingly entered the high-third instead of the high-second grade, he would doubtless now be entering the high-fourth with good class standing. He should have had a little personal attention from the time he entered, should have moved forward rapidly and might now be very happy.

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24. Classroom Teacher, "Problems of Classification", Vol. 2, p.14, The Classroom Teacher, Inc., Chicago, Ill.



ly adjusted.

Every child, however slow or stupid he may seem to be, has a right to kindly personal consideration on the part of the teacher into whose class he has been committed. Furthermore, every adjustment and classification should be open to change and consideration at any time. In fact, it seems wise that a careful and systematic check be made at frequent intervals for the purpose of revealing cases of needed re-adjustment. No child should be "pigeonholed" or sentenced to this or that classification for his entire school life; for he is constantly changing, open to new influences of environment which may help or hinder in his school progress. Therefore, the doors of opportunity should be kept open to every child for the best development of which he is capable.

This is the meaning of the case study approach to classification of pupils.



## CHAPTER III

### PROPOSED CLASSIFICATION PROCEDURES

1 following  
Otto has advanced the classification pro-  
cedures:

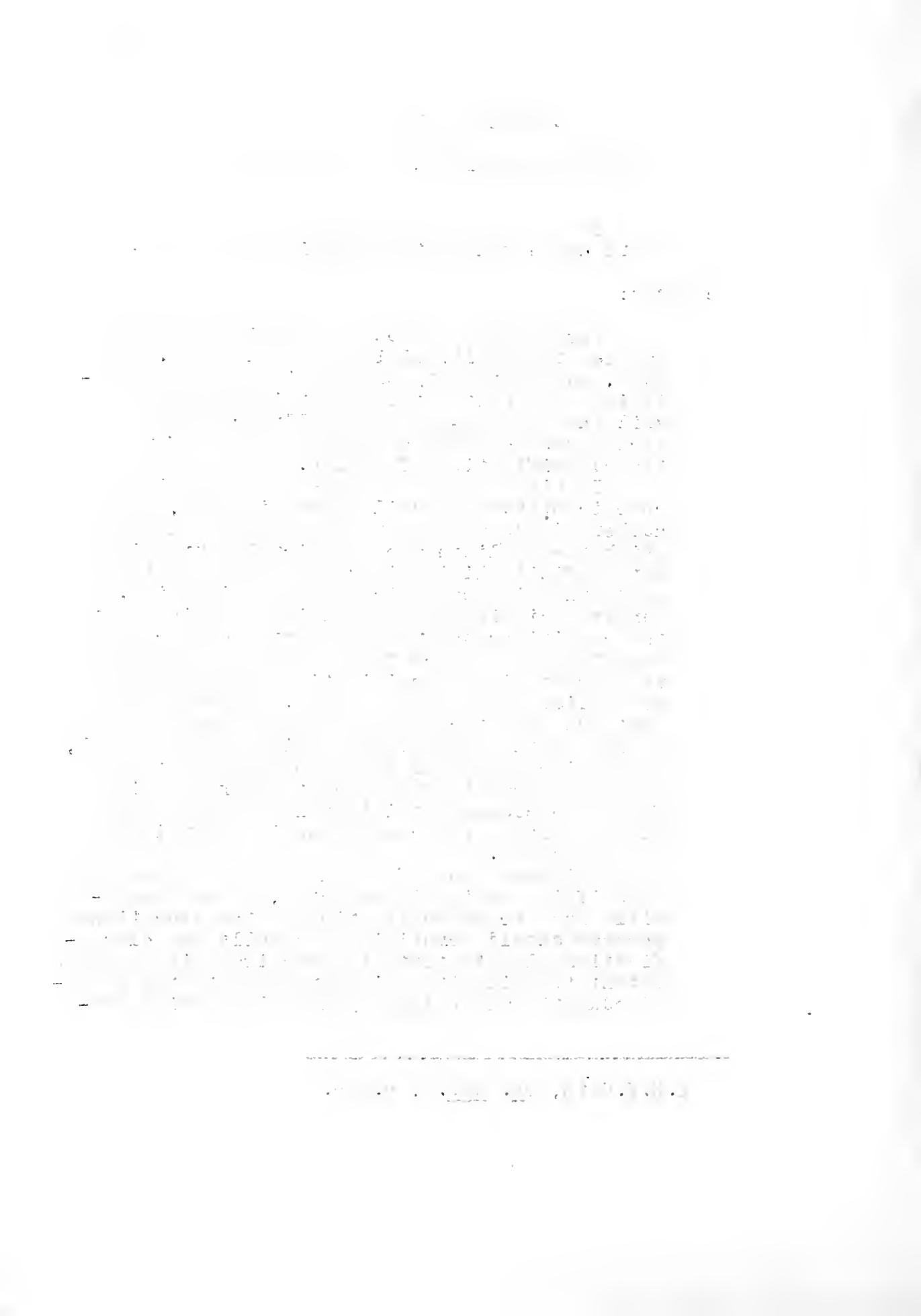
The problem of how to classify children has led to a multiplicity of techniques. In fact, such diversity of practice is characteristic of current methods that it might be said that there ~~is~~ <sup>are</sup> no generally accepted techniques and no standard procedures for the classification of pupils.

In view of the unsettled and relatively chaotic status of pupil classification, a number of educators have suggested techniques which they believe are practicable but which have definite limitations when one endeavors to apply them in the typical school situation. Perhaps principals will continue to find that the conditions under which most local schools operate are not such that the most scientific and progressive classification procedures can be applied in an ideal manner. Regardless of what proposed technique has been accepted as a part of the educational policy of the school, many principals will look upon the adopted plan as a goal toward which to work and will find it necessary at intervals to make such adaptations as the conditions in a particular school demand.

Whichever one of the numerous schemes for classifying pupils is selected, those responsible for the administration of the educational program should scrutinize carefully the classification plan to test its practicability and the extent to which it is in harmony with the general educational philosophy and policy which gov-

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1. H. J. Otto, Op. Cit. , p. 215.



ern the work of the school. After all, the way children are organized into teaching groups has important bearings upon effectiveness with which the educational program can be executed.

2

Dougherty and Others state that the major concern of every method whereby pupils are assigned to classes is to select the pupils that maximum growth will accrue to all members of the group.

From the data that have been reviewed, the assumption is that it is practically impossible to obtain class groups that are homogeneous from the viewpoint of teaching and learning. Also, that mass methods of instruction for all types of school work are rapidly being replaced by types of teaching which utilize extensively diagnostic tests for ascertaining pupil abilities and weaknesses and which provide materials and methods properly adapted to pupil needs. For certain types of activities it appears to be perfectly legitimate to permit each pupil to work and progress at his own rate while other types



of activities may be more fruitful in socializing values if pupils participate co-operatively and, for this phase of the program, it might be desirable to have groups which manifest social homogeneity rather than academic or mental homogeneity. In this event, factors of social maturity would become important for classification.  
3

McGaughy prophesies that the organization of the elementary schools of the future will provide for children of widely differing ages working together at certain times in solving certain common problems. Said he, "This type of classification is known as the 'family group' and it recognizes the educational advantages of having the older children accept certain responsibilities for those who are younger and it is also cognizant of the fact that young children are often taught and guided best by children who are only a few years older." Into this 'family group' would, of course, come the teacher, not as a task-master but as a guide and counselor.  
4

Otto assumes that the children within each class room will be divided or sectioned into two

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3. McGaughy, Op. Cit., p.156

4. H.J.Otto, Op. Cit., <sup>p.</sup> 230

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or three or more groups for instruction in each of the subjects or activities of the curriculum and also that the classroom organization will be very flexible so that any pupil may be readily shifted from one group to another, according to his abilities and needs in the various subjects taught.

5

Otto has gone a step further and said:

If desired, ability grouping, especially for academic subjects, may find a place in this proposed classification plan but, whatever the nature of the work, materials and methods will be adapted to the varying abilities of the pupils. This implies enrichment of the curriculum for the abler students and adjustments for those less able. Competent teachers, skilled in the use of educational and psychological measurements, will employ these instruments as aids in the direction of their work and thus carry on teaching of a high order in an endeavor to obtain maximum pupil growth toward all the aims of elementary education.

6

The ideal plan, as spoken of by Betts, is to group in terms of specific needs, interests, and requirements. He thinks that the plan can be initiated by classifying the children for a particular subject into three groups: (1) those at grade level, (2) those below grade level, and (3) those

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5. Otto, Op.Cit., 216.

6. Emmett Albert Betts, The Prevention and Correction of Reading Difficulties, Row-Peterson and Co., 1937, pp. 41-44.

1. *Leucosia* *leucosia* (L.) *leucosia* (L.)

above standard. Then as the teacher develops in her ability to administer the program and as the children grow in their ability to work in small groups, the class can be further subdivided. Within reasonable limits, then, the individual needs will be cared for to the degree that the number of subdivisions in the class is increased. Individual instruction is in many respects the ideal, but grouping within the classroom is a compromise with the actuality of mass education.

7

Said Betts, " Grouping within the classroom makes possible differentiated assignments in terms of individual needs and interests. In a class of thirty pupils, there may be need for as many as from five to ten groups. This fits in well with either the activity plan or formal instruction".

The social value of grouping within the classroom has been described by Pennell and  
8  
Cusack in the following words:

The use of small groups within the

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7. E.A.Betts, Op.Cit., p.45.

8. Mary E.Pennell and Alice M.Cusack, The Teaching of Reading, Houghton-Mifflin Co., 1935, pp.100-101.



classroom furnishes one of the best opportunities for the development of social habits. Here the individual must adjust himself to the best interests of the group. Self-control must be exercised. Co-operation in a common undertaking is seen to be highly desirable. The leader of each group must be considerate of the different members, allowing individual initiative to take place, provided it furthers the undertaking of the group.

Every child should have the experience of being a wise leader and an intelligent follower.

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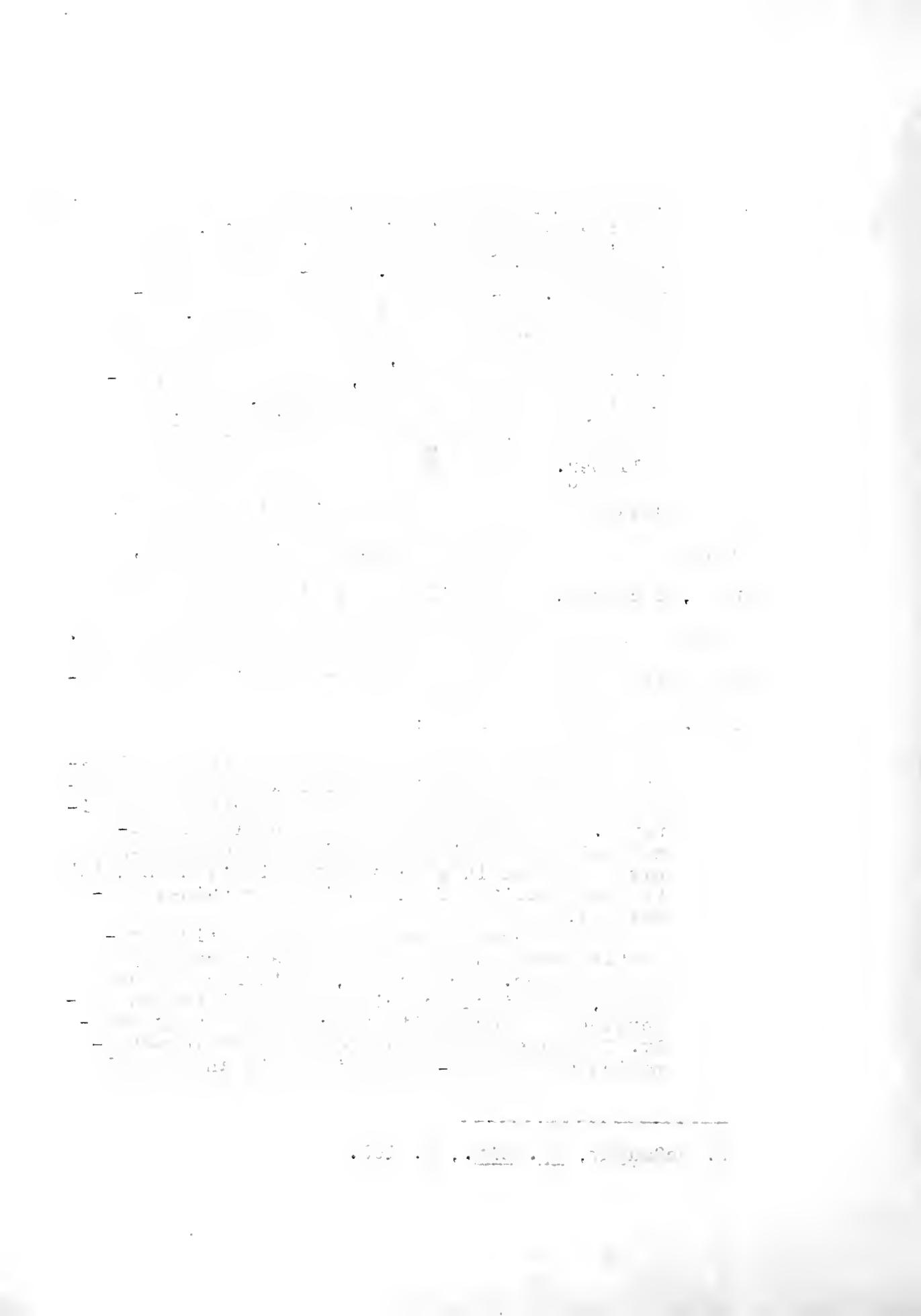
McGaughy believes that eventually elementary schools will not even be classified into grades, then, of course, there will be no division of pupils within the grades into homogeneous or ability groups. He gives two reasons which seem to justify this forecast. They are as follows:

1. The first and most important is the violation of sound principles of educational philosophy which this administrative practice necessitates. The stigmatizing and labeling of human beings as bright or dull or average can have no place in a school organization in which the personality of the pupil is genuinely respected.

The second reason for making this forecast is based on the known facts concerning human beings. Each person, whether child or adult, has highly specialized abilities and undeveloped personality traits which vary widely. The same person may be a genius in mathematics and a near-moron in music and social

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9. McGaughy, Op. Cit., p. 165.



science..... In other words, no human being is homogeneous within himself. The abilities, interests, and personality characteristics of each of us tend to vary all the way from near zero to near perfection. Since this is a fact concerning each individual, it is totally impossible to have a truly homogeneous group of as many as two individuals. To assume that thirty or forty ten-year olds in an elementary school can be so selected that they are in any sense ~~is~~ homogeneous is to disregard undisputed facts concerning human nature.



## CHAPTER IV

### SUMMATION AND CONCLUSION

In summation, the following points seem to be fairly well defined:

1. The term 'classification', as used in the present thesis, is defined as device for providing instructional opportunities for large numbers of pupils at the same time.
2. The aim of ability grouping is to bring together pupils who will be able to work together under conditions permitting the fullest possible development of the individuals involved.
3. It is generally believed that ability grouping does not produce sufficient homogeneity to relieve the teacher of the necessity of providing work for the individual.
4. The mental hygiene effects of whatever grouping is put into effect will depend upon administrative policies and control.
5. Important devices for evaluating the classification of pupils are the age-grade table, the grade-progress table, and the age-grade-progress table.



6. An analysis of the literature concerning current classification procedures indicate that a large number of plans are in use.

7. Some of the most commonly used bases for classification are: (1) chronological age, (2) mental age, (3) educational age, (4) social age, (5) intelligence quotient, (6) physiological age, (7) teacher's judgment, (8) the case study approach.

8. The consensus of opinion seems to be that every classification, regardless of the basis upon which it has taken place, should be open to change and consideration at any time.

9. The major concern of every method whereby pupils are assigned to classes is to select the pupils that maximum growth will accrue to all members of the group.

10. For certain types of activities it appears to be perfectly legitimate to permit each pupil to work and progress at his own rate while other types of activities may be more fruitful in socializing values if pupils participate co-operatively.

11. It is to be assumed that grouping within



the classroom for instructional purposes. This may be done on the basis of homogeneity in the different school subjects or it may be a heterogeneous group small enough to provide for individual differences.

12. Grouping within the classroom makes possible differentiated assignments in terms of individual needs and interests and it also has valuable socializing values.

13. Each person, whether child or adult, has highly specialized abilities and undeveloped personality traits which vary widely and make homogeneous grouping practically impossible.

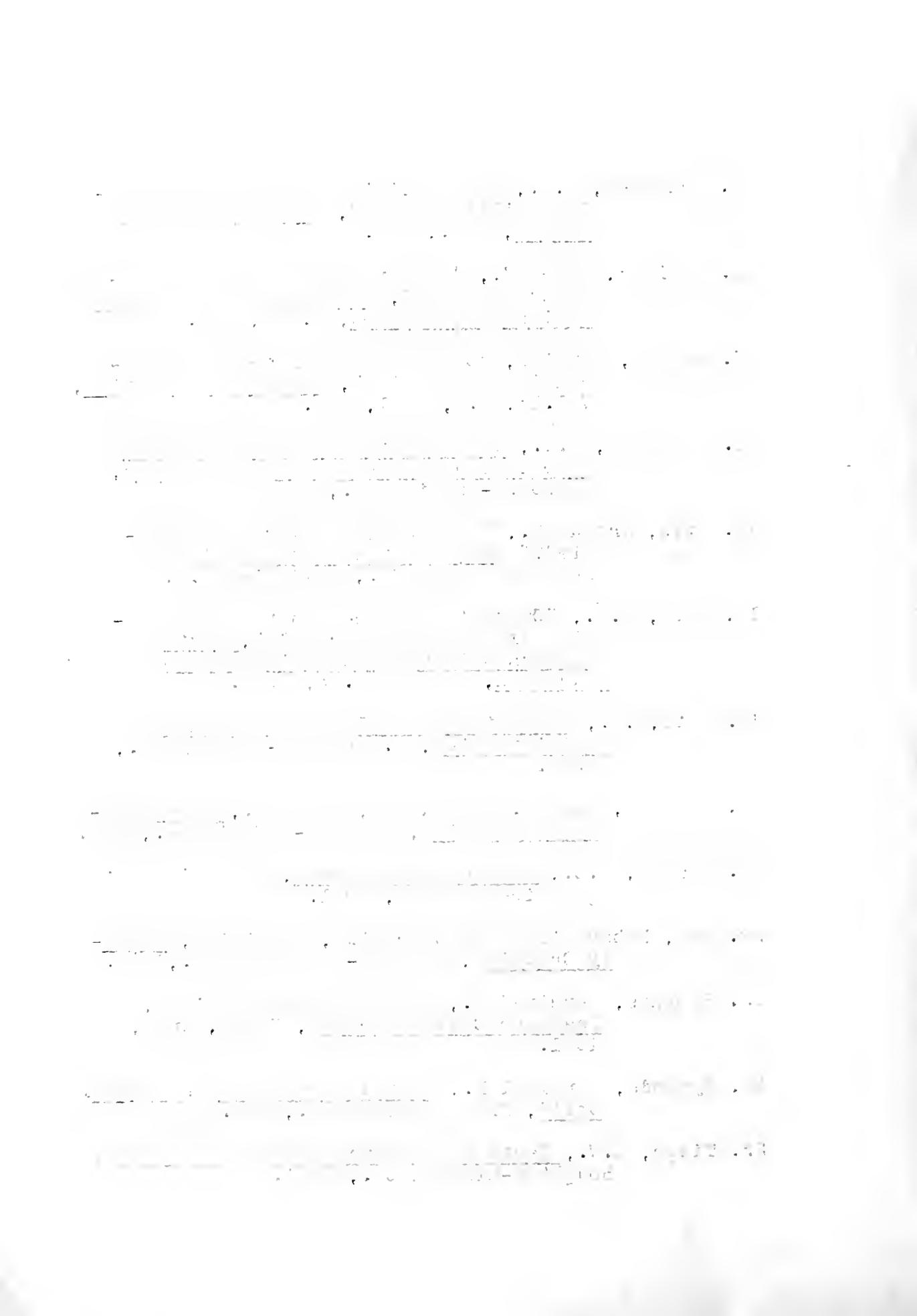


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